



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/635,894

08/05/2003

Arnold Stamler

50325-0806

1595

29989

7590

03/25/2008

HICKMAN PALERMO TRUONG & BECKER, LLP
2055 GATEWAY PLACE
SUITE 550
SAN JOSE, CA 95110

EXAMINER

WALSH, JOHN B

ART UNIT

PAPER NUMBER

2151

MAIL DATE

DELIVERY MODE

03/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/635,894	Applicant(s) STAMLER ET AL.	
	Examiner John B. Walsh	Art Unit 2151	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on RCE of 2/23/08.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-23,25-35,37-47 and 49-68 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-23,25-35,37-47,49-62 and 64-68 is/are rejected.
- 7) ☒ Claim(s) 63 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 63 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 63 is currently dependent upon itself (The claim has not been further treated on the merits).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 2, 4-7, 9-11, 13-20, 22, 23, 25-28, 30-32, 34, 35, 37-40, 42-44, 46, 47, 49-52, 54-56, 58-62 and 64-68 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 7,092,354 B2 to Jensen.

As concerns claims 1, 22, 34 and 46 identifying a network element that has failed (column 2, lines 47-50); selecting a substitute network element (column 2, lines 41-42; standby node) from among a pool of one or more available network elements (column 2, lines 41-42); receiving connection configuration information from the identified network element (column 6, lines 48-49); based on the connection configuration information, re-configuring the substitute

Art Unit: 2151

network element (column 2, lines 47-52; column 4, lines 36-42; column 7, lines 9-11) and one or more switch devices (column 2, lines 56-58; column 1, lines 56-59) associated with the identified network element, wherein the re-configuring causes the one or more switch devices to change one or more connections from the identified network element to the substitute network element (column 2, lines 56-58); a cluster manager (column 4, lines 36-42) is communicatively coupled to a cluster comprising a plurality of active network elements, the pool of one or more available network elements, a first network switch and a second network switch (column 2, lines 41-42; column 1, lines 56-59; column 3, lines 11-12).

As concerns claims 2, 23, 35 and 47 the identified network element is one of a plurality of network elements in a cluster that is associated with the first and second network switches (column 2, lines 41-42; column 3, lines 11-12).

As concerns claims 4, 14, 25, 37 and 49 reconfiguring comprises sending a trigger event (column 6, lines 23-26) to the substitute network element that causes the substitute network element to retrieve a configuration over a network connection (column 6, lines 39-45).

As concerns claims 5, 15, 26, 38 and 50 reconfiguring comprises dynamically reconfiguring the selected network element as a logical clone of the identified network element (column 6, lines 47-51).

As concerns claims 6, 16, 27, 39 and 51 associating the identified network element with the pool of available network elements (column 2, lines 41-42).

As concerns claims 7, 17, 28, 40 and 52 sending an initial configuration to the substitute network element (column 6, lines 48-49); sending a partial accumulated configuration to the substitute network element (column 6, lines 60-column 7, line 10); and sending instructions that

cause the identified network element to reboot (column 7, lines 12-13) based on a configuration setting of a cluster associated with the identified network element.

As concerns claims 9, 18, 30, 42 and 54 each of the network elements is a network aggregation device or a network access server (column 1, lines 56-59).

As concerns claims 10, 19, 31, 43 and 55 repeating for multiple concurrently failed network elements (column 7, lines 12-23; column 3, lines 11-12).

As concerns claims 11, 20, 32, 44 and 56 receiving a message specifying a failure of a network element over an event bus on which the network elements publish events and on which a cluster manager subscribes to events (column 6, lines 39-42); based on the message, identifying the network element that has failed (column 6, lines 39-42).

As concerns claim 13, receiving a first user input (column 4, lines 36-42; user input in the form of programmed instructions) that defines a cluster comprising a first network switch, a plurality of network elements and a second network switch (column 2, lines 41-42; column 1, lines 56-59); receiving a second user input (column 4, lines 36-42; user input in the form of programmed instructions) that specifies one or more of the network elements as a pool of available network elements (column 2, lines 41-42); identifying a network element that has failed (column 2, lines 47-50); selecting a substitute network element from among a pool (column 2, lines 41-42); re-configuring the first and second network switches (column 2, lines 56-58; column 1, lines 56-59), wherein the re-configuring causes the first and second network switches to change one or more connections from the identified network element to the substitute network element (column 2, lines 56-58); a cluster manager (column 4, lines 36-42) is communicatively coupled to a cluster comprising a plurality of active network elements, the pool of one or more

Art Unit: 2151

available network elements, a first network switch and a second network switch (column 2, lines 41-42; column 1, lines 56-59; column 3, lines 11-12).

As concerns claim 58, the cluster manager managing a plurality of connection objects (column 6, lines 48-49; col. 5, lines 31-32) corresponding to the number of subscribers in the network (routing information can correspond to a number of subscribers).

As concerns claim 59, wherein a connection comprises a programmatic object that points to a fixed defined set of templates intended to be applied to a stack device and adjacent switches, and contains attributes providing specific substitution values to be used when instantiating the templates into actual configuration (column 6, lines 48-49; col. 5, lines 31-32).

As concerns claim 60, when failover occurs, the cluster manager logically re-associating all of the plurality of connection objects of the failed device (col. 6, lines 35-55) with the new device selected from a pool of available substitute devices (column 2, lines 41-42).

As concerns claim 61, a switch adjacent to a failing node sending an event on an event bus indicating that an interface on a failing switch is no longer active (col. 6, lines 39-55).

As concerns claim 62, the cluster manager receiving notification of the event and identifying a node that has failed (col. 6, lines 25-55).

As concerns claim 64, the cluster manager using a keepalive or heartbeat protocol against a plurality of stack elements (col. 6, lines 25-45).

As concerns claim 65, the cluster manager searching for a device in the free pool that is available for use as a fail-over device (column 2, lines 41-42).

As concerns claim 66, identifying a network element that has failed (col. 6, lines 30-42); selecting a substitute network element from among a pool of one or more available network

Art Unit: 2151

elements (column 2, lines 41-42); receiving connection configuration information from the identified network element (col. 6, lines 45-52); and based on the connection configuration information, re-configuring the substitute network element and one or more switch devices associated with the identified network element, wherein the reconfiguring causes the one or more switch devices to change one or more connections from the identified network element to the substitute network element (col. 6, lines 46-47); wherein the step of re-configuring comprises the steps of sending a trigger event (col. 6, lines 30-42) to the substitute network element that causes the substitute network element to retrieve a configuration over a network connection.

As concerns claim 67, identifying a network element that has failed (col. 6, lines 30-42); selecting a substitute network element from among a pool of one or more available network elements (column 2, lines 41-42); receiving connection configuration information from the identified network element (col. 6, lines 45-52); and based on the connection configuration information, re-configuring the substitute network element and one or more switch devices associated with the identified network element, wherein the reconfiguring causes the one or more switch devices to change one or more connections from the identified network element to the substitute network element (col. 6, lines 46-47); wherein re-configuring comprises dynamically reconfiguring the selected network element as a logical clone (col. 6, lines 19-20, lines 48-50) of the identified network element.

As concerns claim 68, identifying a network element that has failed (col. 6, lines 30-42); selecting a substitute network element from among a pool of one or more available network elements (column 2, lines 41-42); receiving connection configuration information from the identified network element (col. 6, lines 45-52); and based on the connection configuration

Art Unit: 2151

information, re-configuring the substitute network element and one or more switch devices associated with the identified network element, wherein the reconfiguring causes the one or more switch devices to change one or more connections from the identified network element to the substitute network element (col. 6, lines 46-47); sending an initial configuration to the substitute network element (col. 6, line 19); sending a partial accumulated configuration to the substitute network element (column 6, lines 60-column 7, line 10; also configuration data may be “partial” since it may not reflect the routing information at that instance for the network, only an “accumulated configuration” of what was known at the last update); and sending instructions that cause the identified network element to reboot based on a configuration setting of a cluster associated with the identified network element (col. 6, lines 62-65; column 7, lines 12-13).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 12, 21, 33, 45 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,092,354 B2 to Jensen as applied above in view of U.S. Patent No. 6,456,600 to Rochberger et al.

Jensen '354 does not explicitly disclose an ATM switch.

Rochberger et al. '600 teach an ATM switch (column 1, lines 26-30).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Jensen '354 with an ATM switch, as taught by Rochberger et al. '600, in order to provide a switch for transferring various network traffic at high speeds (Rochberger et al. '600: column 1, lines 26-28).

6. Claims 8, 29, 41 and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 7,092,354 B2 to Jensen as applied above in view of U.S. Patent No. 5,751,967 to Raab et al.

Jensen '354 disclose associating the network elements in a cluster with a first switch and a second switch and the network elements are reserved in the pool of available network elements (column 2, lines 41-42; column 2, lines 56-58; column 1, lines 56-59; column 4, lines 36-42; user input in the form of programmed instructions).

Jensen '354 does not explicitly disclose the user input is a graphical user interface.

Raab et al. '967 teach a graphical user interface (GUI) (column 6, line 18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the system of Jensen '354 with a GUI, as taught by Raab et al. '967, to provide a user input that is easily accessible to a user since it is graphical in nature.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John B. Walsh whose telephone number is 571-272-7063. The examiner can normally be reached on Monday-Thursday from 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/John B. Walsh/
Primary Examiner, Art Unit 2151